

Notice of Allowability

Application No.

09/486,625

Examiner

Bo Peng

Applicant(s)

AYYAVOO ET AL.

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/23/06.
2. ☒ The allowed claim(s) is/are 3-5, 7-11, 18-20, 22, 23, 25-27, 29-31, 33 and 34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☒ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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1. Applicant's amendment, filed on May 23, 2006, is acknowledged. Claims 1, 2, 6, 12-17, 21, 24, 28 and 32 were canceled. Claims 3, 18, 22, 23, 33 and 34 were amended in the response to the Non-final Action dated on February 23, 2006. Claims 3-5, 7-11, 18-20, 22, 23, 25-27, 29-31, 33 and 34 are pending.

EXAMINER'S AMENDMENT

2. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this Examiner's Amendment was given in a telephone interview with Attorney Mark Deluca on July 31, 2006.

4. Amend claim 3:

An isolated nucleic acid molecule comprising a nucleic acid sequence encoding an attenuated non-functional ~~vif~~ ~~vif~~ protein, wherein said nucleotide sequence encodes an ~~Arginine~~ Alanine in place of Proline at position 162 of SEQ NO:1.

5. Amend claim 4:

The nucleic acid molecule of claim 22 wherein said nucleic acid molecule comprises a nucleotide sequence which encodes ~~an~~ the amino acid sequence of SEQ ID NO: 4.

6. Amend claim 5:

The nucleic acid molecule of claim 23 wherein said nucleic acid molecule comprises a the nucleotide sequence of SEQ ID NO: 27.

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7. Amend claim 9:

The recombinant expression vector of claim 25 wherein said nucleic acid molecule comprises a nucleotide sequence which encodes ~~an~~ the amino acid sequence of SEQ ID NO: 4.

8. Amend claim 11:

The host cell of claim 29 wherein said nucleic acid molecule comprises a nucleotide sequence which encodes ~~an~~ the amino acid sequence of SEQ ID NO: 4.

9. Amend claim 18:

A plasmid comprising a nucleotide sequence encoding an isolated, attenuated non-functional vif ~~vif~~ protein, wherein said nucleotide sequence encodes an ~~Arginine~~ Alanine in place of Proline at position 162 of SBQ ID NO: 1.

10. Amend claim 19:

The plasmid of claim 33 wherein said protein comprises ~~an~~ the amino acid sequence of SEQ ID NO: 4.

11. Claims 3-5, 7-11, 18-20, 22, 23, 25-27, 29-31, 33 and 34 are pending and allowable.

12. Please add following paragraph into the first paragraph of specification:

This application is a 371 of PCT International Application No. PCT/US98/19478, filed September 18, 1998 and claims benefit of 60/060, 172, filed September 26, 1997.

13. Please replace the paragraph on page 8 of specification, lines 24-25 with the following:

Figures 7A-7F show the amino acid sequences of preferred attenuated non-functional vif proteins of the present invention. Figure 7A shows Vif-N13.pep (SEQ ID NO: 4); Vif-N15.pep (SEQ ID NO: 5); and Vif-N17.pep (SEQ ID NO: 6). Figure 7B shows Vif-N22.pep (SEQ ID NO: 7); Vif-N24.pep (SEQ ID NO: 9); Vif-N26.pep (SEQ ID NO: 10); and Vif-N27.pep (SEQ ID NO: 11). Figure 7C shows Vif-N29.pep (SEQ ID NO: 12); Vif-N30 (SEQ ID NO: 13); Vif-T3.pep (SEQ ID NO: 14); and Vif-T35.pep (SEQ ID NO: 16). Figure 7D shows Vif-T37.pep (SEQ ID NO: 17); Vif-T38.pep (SEQ ID NO: 18); and Vif-T39.pep (SEQ ID NO: 19). Figure 7E shows Vif-T4.pep (SEQ ID NO: 15); Vif-T40.pep (SEQ ID NO: 20); and Vif-T42.pep (SEQ ID NO: 21). Figure 7F shows Vif-T43.pep (SEQ ID NO: 22) and Vif-T44.pep (SEQ ID NO: 23).

14. The following is an examiner's statement of reasons for allowance:

(1) The objection of claims 4, 5, 9, 11, 19, 20, 22, 23, 25-27, 29-31, 33 and 34 is **withdrawn** in view of Applicant's argument and the amendment to the claims.

(2) The rejection of claims 22, 23, 33 and 34 under the second paragraph of 35 U.S.C. 112 is **withdrawn** in view of Applicant's argument.

(3) The rejection of claims 3, 7, 8 and 18 under the first paragraph of 35 U.S.C. 112, as a new matter, is **withdrawn** in view of Applicant's argument. The typing error is corrected by Examiner's amendment.

(4) The rejection of claims 22, 33 and 34 under the first paragraph of 35 U.S.C. 112, as failing to comply with written description, is **withdrawn** in view of Applicant's argument.

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(5) Claims 3-5, 7-11, 18-20, 22, 23, 25-27, 29-31, 33 and 34 are free of the prior art of the record. The Examiner is not aware of any suggestion in the prior art of the record that would point the artisan to the claimed isolated nucleic acid molecules encoding vif mutants comprising the nucleotide sequences of SEQ ID NOs: 27, 32 and 33, and their corresponding amino acid sequence of SEQ ID NOs: 4, 9 and 10. The Examiner is not aware of the prior art of the record suggested the change of Proline to Alanine at position 162 of vif protein.

15. Accordingly, claims 3-5, 7-11, 18-20, 22, 23, 25-27, 29-31, 33 and 34 are allowed.


16. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bo Peng, Ph.D. whose telephone number is 571-272-5542. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell, Ph.D. can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Bo Peng, Ph.D.
8/3/06


MARY E. MOSHER, PH.D.
PRIMARY EXAMINER